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Attorney's Docket No.: 13377-002001 / 500840/MRO

### REMARKS

This document is filed in reply to the Office Action dated June 1, 2004 ("Office Action"). Applicants have amended the Specification to update the deposit information pursuant to the Examiner's suggestion. Applicants have also amended claims 24, 25, 75, 89, and 99 to promote clarity. Support for the amendment to claim 24 can be found at page 7, lines 12-15 and lines 20-30; at page 12, lines 5-11; and at page 22, lines 11-31; at page 26, lines 3-7; and at page 68, line 12 to page 76, line 15 of the Specification. Support for the amendment to claim 25 can be found at page 27, lines 11-17; at page 55, lines 18-24; and at page 68, line 12 to page 76, line 15 of the Specification. Support for the amendment to claims 75, 89, and 99 can be found at page 33, lines 19-26 of the Specification. No new matter has been introduced.

Claims 1-102 are pending. Among them, claims 1-23 and 28-72 have been withdrawn from further consideration for being drawn to a non-elected invention. Upon entry of the proposed amendments, claims 24-27 and 73-102 are now under examination. Reconsideration of this application is requested in view of the following remarks:

#### Rejection under 35 U.S.C. § 112, second paragraph

The Examiner rejected claims 24-27 and 73-102 for indefiniteness. It is her position that three terms "biocontrol properties," "derivatives," and "PQQ-dependent manner" recited in a number of claims are uncertain. See the Office Action, page 2, line 16 through page 3, line 8. In view of the above amendments, Applicants submit that the rejection should be withdrawn.

#### Rejection under 35 U.S.C. § 112, first paragraph

The Examiner rejected claims 24-27 and 73-102 for failing to meet the written description requirement. According to the Examiner, "[a]t least some of the claims require ... a specific microorganism ... *Pseudomonas* strain AN5 rif (AGAL accession no. 00/09624). But it is not clear from the specification or record that the microorganism(s) is readily available to the public." She further suggested:

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Because the Australian Government Analytical Laboratories (AGAL) has acquired the status of an International Depository in accordance to the Budapest Treaty, [pursuant to 37 C.F.R. 1.808,] a declaration stating that all restriction to the claimed strain AN5 rif (AGAL accession no. 00/09624) will be irrevocable removed upon issuance of the patent will overcome this rejection as applied to the claimed strain AN5 rif (AGAL accession no. 00/09624).

At her suggestion, Applicants have (i) amended the Specification to update the deposit information and include a statement in compliance with 37 C.F.R. 1.808; and (2) submitted a declaration by the attorney of record, stating that all restrictions imposed by the depositor on the availability to the public of the deposited hybridomas will be irrevocably removed upon the granting of a patent. Thus, it is submitted that the rejection has been overcome and should be withdrawn.

Rejection under 35 U.S.C. § 102(b)

The Examiner rejected claims 24-27, 73-80, 82-84, 86-94, and 96-102 as being anticipated by Nayudu et al., 1994, In Improving plant productivity with Rhizosphere bacteria, International workshop on plant growth promoting Rhizobacteria. Adelaide, South Australia, Editors Bowen GD et al., pp 122-124( "Nayudu"). See the Office Action, page 5, lines 1-2.

Applicants have amended independent claim 24 and respectfully traverse the Examiner's ground for rejection. Claim 24, as amended, is drawn to an isolated biocontrol agent containing a bacterial cell that has, among others, an ability to reduce or prevent the growth of a fungus to a level comparable to the reduction or prevention of growth of the fungus obtained using the deposited bacterium *Pseudomonas* strain AN5 rif (AGAL Accession No. NM 00/09624), i.e., an biocontrol ability. According to the Examiner, Nayudu describes 5 classes of AN5 mutants that have all the aspects of the bacterial cell recited in claim 24, including the biocontrol ability "against fungal plant pathogens including fungus *Gaeumannomyces graminis* ..." See, the Office Action, page 5, lines 16-18.

Applicants would like to point out that the 5 classes of AN5 mutants taught in Nayudu are "classes of reduced antibiosis mutants." See, e.g., page 122, column 1, penultimate line. More specifically, Nayudu teaches that the mutants, compared with AN5, "showed significantly reduced biological control protection" and "have decreased or no ability to inhibit

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[*Gaeumannomyces graminis*].” See Table 1, last column and corresponding note, and page 123, column 2, lines 4-6, respectively. In contrast, the bacterial cell recited in claim 24 has a biocontrol ability comparable to that of AN5 rif. Thus, the mutants of Nayudu do not include the bacterial cell recited in claim 24 and, therefore, does not anticipate claim 24.

Independent claims 82 and 92 cover methods of using the biocontrol agent of claim 24. Independent claim 102 is drawn to a composition containing the biocontrol agent of claim 24. For the same reasons set forth above, they are novel over Nayudu. So are claims 25-27, 73-80, 83, 84, 86-91, 93, 94, and 96-101, all of which depend from claim 24, 82, or 92.

Rejection under 35 U.S.C. § 103(a)

The Examiner rejected claims 24-27 and 73-102 for obviousness over Nayudu in view of Dahiya et al., 1998, Bot. Bull. Academia Sinica 29: 135-142 (“Dahiya”), Schnider et al., 1995, Applied and Environmental Microbiology 61:3856-3864 (“Schnider”), and U.S. Patent 4,456,684 to Weller et al., (“Weller”). See the Office Action, the paragraph bridging pages 6 and 7.

According to the Examiner, (1) Nayudu teaches “bacterial agents or cells that clearly effective against plant pathogens;” (2) Dahiya teaches that “bacterial cells belonging to *Pseudomonas* ... are capable to produce pyrrolnitrin and phenazine antibiotics that are active against fungal plant pathogens;” (3) Schnider teaches that *Pseudomonas* cells “produces various antibiotics active toward various plant pathogens, are capable to utilize glucose;” and (4) Weller teaches non-AN5-derived *Pseudomonas* cells that “are effective ... for treating fungal infections of plants, [and] capable to utilize an aldose.” As such, she concluded that “it would have been obvious ... to obtain a biocontrol agent composition with bacterial cells belong to *Pseudomonas* ... for treating fungal plant pathogens.”

Applicants respectfully traverse the Examiner’s ground for rejection and, again, address amended independent claim 24 first. As discussed above, claim 24 as amended is drawn to an isolated biocontrol agent containing a bacterial cell that reduces or prevents the growth of a fungus to a level comparable to that by AN5 rif. Since the above-discussed four references, alone or combined, do not teach or suggest a bacterial cell having a biocontrol ability comparable to that of AN5 rif as required in claim 24, they do not render claim 24 obvious. By

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the same token, they do not render obvious independent claims 82, 92, and 102, all of which require the just-discussed bacterial cell. Neither do they render obvious claims 25-27, 73-80, 83-91, and 93-101, all of which depend from claim 24, 82, or 92.

Furthermore, claims 73, 76, and 82-102 are not rendered obvious by the four cited references on a separate and independent ground. Of note, claims 73, 76, and 102 cover an isolated biocontrol agent containing a bacterial cell that produces anti-fungal sugar acid or a composition containing the agent, and claims 82 and 92, drawn to methods of using an isolated biocontrol agent, require an agent containing such a bacterial cell. As none of the four references cited by the Examiner teaches or suggests such a bacterial cell, neither does their combination. Thus, claims 73, 76, 82, and 92, as well as claims 83-91 and 93-102 dependent therefrom, are non-obvious over these cited references.

#### CONCLUSION

Applicants submit that grounds for the rejections asserted by the Examiner have been overcome, and that claims, as pending, define subject matter that is definite, sufficiently described, novel and non-obvious. On this basis, it is submitted that allowance of this application is proper, and early favorable action is solicited

Enclosed is a Petition for Three Month Extension of Time. Please apply the \$490 fee, and any other charges or credits, to deposit account 06-1050, referencing attorney docket 13377-002001.

Respectfully submitted,

Date: \_\_\_\_\_

12-1-04

Y. Rocky Tsao

Y. Rocky Tsao, J.D., Ph.D.  
Attorney for Applicant  
Reg. No. 34,053

PTO Customer No. 26161  
Fish & Richardson P.C.  
225 Franklin Street  
Boston, MA 02110-2804  
Telephone: (617) 542-5070  
Facsimile: (617) 542-8906  
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